

EXHIBIT 8

Edward Cunningham, 2020-12-04 11:48:34

Hey Abhishek - have been thinking about the UX flows a lot since our chat!

I mocked up a couple of versions related to what you said in the slides: https://docs.google.com/presentation/d/1TGu57DpGE1qfgTJK0aH_HnroA7GUwwfTibxtbV3TV68/edit#slide=id.gaefd7c0e1c_0_44

Edward Cunningham, 2020-12-04 11:48:51

How it could look if we brought the permission grant into the dialog:
I shared "image.png" using the new Google Chat https://chat.google.com/dm/jouHIQAAAAE.

Edward Cunningham, 2020-12-04 11:49:26

And a bottom sheet exploration:
I shared "image.png" using the new Google Chat https://chat.google.com/dm/jouHIQAAAAE.

Edward Cunningham, 2020-12-04 11:50:53

When playing about with it I started to feel that maybe a dialog along the same lines as the al ly one might give us flexibility to convey the message most clearly. Will think about it some more over the weekend.

Edward Cunningham, 2020-12-04 11:51:15

(These explorations obviously ideas for what we'd do if there was nothing special for stores themselves - could be the same for any app/browser).

Abhishek Kumar, 2020-12-04 11:51:37

the permission dialog model will be a lot cleaner. The only thing to think about is how can you find the settings later an revoke it when needed

Edward Cunningham, 2020-12-04 11:51:39

(Also hope you don't mind history on - I am told this is necessary for this topic).

Edward Cunningham, 2020-12-04 11:53:49

In some way the risk of a user being unsure how to revoke is much less significant than other permissions, since even with the permission granted the user still has to confirm any new app install via the install dialog. I also wondered if with an inline dialog it might then be easier for us to consider auto-revoking after X months (since it is easy for the user to regrant, and wouldn't break anything).

Abhishek Kumar, 2020-12-04 11:54:42

in the bottom sheet version - if we remove the first dialog, then this flow might also get smoother as well

Abhishek Kumar, 2020-12-04 11:55:31

dialog can also be per-session

Edward Cunningham, 2020-12-04 11:55:53

At least in the browser case (since I doubt a browser would specifically add code to invoke the bottom sheet) I expect the dialog would still need to show prior to the bottom sheet, if we went down that path.

Abhishek Kumar, 2020-12-04 11:55:53

like out "One time" permission

Abhishek Kumar, 2020-12-04 11:55:58

*our

Edward Cunningham, 2020-12-04 11:56:54

I think that might be seen as a regression for stores. Also complicates us enabling auto-updates (since for that to work we don't really expect the user to necessarily have a session;).

Abhishek Kumar, 2020-12-04 11:57:06

ok

Edward Cunningham, 2020-12-04 11:58:18

I guess the main risk of the dialog is that it becomes easy to click through blindly without reading, whereas alternatives (and existing behaviour) requires a little more thought/confirmation of intent on the part of the user.

Edward Cunningham, 2020-12-04 12:01:32

I did some analysis today to try and see the impact of the existing unknown source dialog on malware installs: [This shows that users who had previously granted the permission to Chrome \(and thus weren't seeing the unknown source dialog\) had a much higher malware rate for the apps they installed. On that basis the existing dialog appears to be doing a reasonable job.
If we enabled auto-revoke after a certain period \(which an integrated dialog would make easier to consider\), then perhaps we'd even do a better job at protecting those Chrome users who previously had enabled the permission and are now at greater risk of malware.](https://www.google.com/url?q=https://docs.google.com/presentation/d/1TGu57DpGE1qfgTJK0aH_HnroA7GUwwfTibxtbV3TV68/edit%23slide%3Did.gaefd7c0e1c_0_33&sa=D&source=hangouts&ust=1607198492306000&usg=AFQjCNHWsH9QMfr7-FTYBsP-0WzsT0XUdw)

Abhishek Kumar, 2020-12-04 12:02:07

One option is to still make a dialog, but add a speed bump to make sure users understand the risk. Like add a checkbox that activates the Allow button.

Edward Cunningham, 2020-12-04 12:05:07

Yeah. It would be really nice if we could A/B test this sort of thing better (like Chrome does with its warning dialogs, and we've done in the past with Play Protect).

Edward Cunningham, 2020-12-04 12:11:32

Might find time to chat about this a bit more next week. Really appreciate you discussing this with me and your thoughts so far 😊 Hope you have a good weekend!

Abhishek Kumar, 2020-12-04 12:12:22

Have a good weekend!